REMARKS

Claims 1-18 are currently pending, wherein claims 1-6 and 12-17 have been amended to correct typographical and/or translation errors, and new claim 18 has been added. Applicant respectfully requests favorable reconsideration in view of the remarks present herein below.

At the outset, Applicant notes with appreciation the indication that claim 10 contains allowable subject matter and would be allowed if rewritten in independent form.

On page 2 of the Office Action ("Action"), the Examiner objects to the title as not being descriptive. Applicant notes that the title recites a "Cold Cathode Light Emitting Device, Image Display, and Method of Manufacturing Cold Cathode Light Emitting Device" and the claims recite a cold cathode light emitting device, a display and a method of manufacturing same. Accordingly, the title has been amended. Applicant respectfully requests an indication of the acceptability of the title with the next Action.

Also on page 2, the Examiner objects to claims 13 and 15 because the labels "d1" and "d2" are allegedly used to describe two different values. More specifically, the Examiner asserts that the labels "d1" and "d2" are used to describe the diameter of the holes in the insulating layers and the size of the polishing particles. Applicant respectfully disagrees.

The labels "d1" and "d2" refer to the diameter of a hole in the insulating layers as defined in claim 1. In claims 13 and 15, the diameter of the polishing particles is labeled "ds". In addition, claims 13 and 15 define the relationship between the diameter of the polishing particles (ds) and the diameters of the hole (d1 and d2). However, the labels d1 and d2 are only used to denote the diameters of the hole. Accordingly, the Examiner's objection is unfounded. Never the less, in order to expedite prosecution of the present application, the labels d1 and d2 have been removed from the claims.

On page 3 of the Action, the Examiner rejects claims 1-9 and 11-17 under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 5,229,331 to Doan et al. ("Doan") in view of U.S. Patent No. 6,515,415 to Han et al. ("Han"). Applicant respectfully traverses this rejection.

In order to support a rejection under 35 U.S.C. § 103, the Action must establish a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness three criteria must be met. First, there must be some motivation to combine/modify the cited references. Second, there must be a reasonable expectation of success. Finally, the combination must teach each and every claimed element. In the present case, claims 1-9 and 11-17 are not rendered unpatentable over the combination of Doan and Han because the Examiner fails to establish a *prima facie* case of obviousness as discussed below.

Independent claim 1 defines a cold cathode light emitting device emitting light by electrons extracted from a cold cathode. The device includes, *inter alia*, a plurality of first electrodes, a plurality of insulating layers laminated ~~in~~ over said plurality of first electrodes, a plurality of second electrodes provided on said plurality of insulating layers to intersect said plurality of first electrodes with said plurality of insulating layers interposed there between, for extracting electrons from said plurality of first electrodes, a third electrode opposed to said plurality of second electrodes for emitting light upon receipt of said electrons, with a voltage for accelerating said electrons being applied between said third electrode and said plurality of first electrodes, wherein at least one hole ~~is~~ provided at each intersection of said plurality of first electrodes and said plurality of second electrodes extending through said plurality of second electrodes and said plurality of insulating layers to reach a surface of said plurality of first electrodes, said at least one hole having a first

diameter (d1) at a position where a first of said plurality of insulating layers contacts said plurality of first electrodes and a second diameter (d2) at position where a second of said plurality of insulating layers contacts said plurality of second electrodes, where d2 is greater than d1, and a nanofiber-structure layer provided on said plurality of first electrodes in an opening portion corresponding to said first diameter d1 in said at least one hole.

Doan discloses a chemical mechanical polishing process for the formation of self-aligned gate structures surrounding an electron emission tip for use in field emission displays. According to the method of Doan, the emission tip is deposited with a flowable insulating material which is reflowed below the level of the tip as illustrated in Figs. 6A and 6B of Doan. However, Doan fails to disclose or suggest a cold cathode light emitting device that includes a nanofiber-structure layer provided on a plurality of first electrodes in an opening portion corresponding to said first diameter d1 in said at least one hole as claimed.

Han discloses a triode carbon nanotube field emission display using a barrier rib structure and a method of manufacturing same. According to Han, barrier ribs are formed on cathode lines by a screen printing method, a mesh structure is mounted on the barrier ribs, and a spacer is inserted between the barrier ribs through slots of the mesh structure. However, Han, like Doan, fails to disclose or suggest a cold cathode light emitting device as claimed.

Since Doan and Han both fail to disclose or suggest a cold cathode light emitting device that includes at least one hole provided at each intersection of a plurality of first electrodes and a plurality of second electrodes extending through said plurality of second electrodes and a plurality of insulating layers to reach a surface of said plurality of first electrodes, wherein said at least one hole has a first diameter at a position where a first of said plurality of insulating layers contacts said

plurality of first electrodes and a second diameter at a position of said plurality of second electrodes, where the second diameter is greater than the first diameter, the combination of these two reference cannot possible disclose or suggest said element. Therefore, even if one skilled in the art were motivated to combine Doan and Han, which Applicant does not concede, the combination would still fail to render claim 1 unpatentable because the combination fails to disclose each and every claimed element.

In rejecting claim 1, the Examiner points to Fig. 6A of Doan as discloses at least one hole as claimed. However, as clearly illustrated in Fig. 6A, the diameter of the hole at the position of the second electrode (i.e., layer 15 in Fig. 6A) is not greater than the diameter of the hole at the position of the an insulating layer which contacts the first electrode (i.e., layer 18 in Fig. 6A). Accordingly, neither Doan and Han singularly nor in combination disclose a cold cathode light emitting device that includes at least one hole as claimed.

Claims 2-9 and 11 depend from independent claim 1. Therefore, claims 2-9 and 11 are patentable over the combination of Doan and Han for at least those reasons presented above with respect to claim 1.

Independent claim 12 defines a method for manufacturing a cold cathode light emitting. The method includes, *inter alia*, providing a first substrate, forming a plurality of first electrodes on said first substrate, forming a first insulating layer on said plurality of first electrodes, patterning the first insulating layer, forming a second insulating layer on the patterned first insulating layer, forming a plurality of second electrodes on said second insulating layer such that the plurality of second electrodes intersect said plurality of first electrodes with said first and second insulating layers interposed there between, patterning the plurality of second electrodes and the second

insulating layer, wherein the patterning of the first insulating layer, the second insulating layer and the plurality of second electrodes forms a least one hole at each intersection of said plurality of first electrodes and said plurality of second electrodes extending through said plurality of second electrodes and said first and second insulating layers to a surface of said plurality of first electrodes, coating a solvent containing a nanofiber-structure material dispersed therein on a surface of said plurality of patterned second electrodes and said first and second insulating layers having said at least one hole formed therein, drying said solvent to form a dried film, and spraying polishing particles at a high pressure onto a surface of said dried film containing said nanofiber-structure material to remove said dried film except that portion of the nanofiber-structure formed in the at least one hole corresponding to a opening formed by patterning the first insulating layer.

Independent claim 12 is patentable over the combination of Doan and Han because the combination fails to disclose or suggest a method of method for manufacturing a cold cathode light emitting that includes coating a solvent containing a nanofiber-structure material dispersed therein on a surface of said plurality of patterned second electrodes and said first and second insulating layers having said at least one hole formed therein, drying said solvent to form a dried film, and spraying polishing particles at a high pressure onto a surface of said dried film containing said nanofiber-structure material to remove said dried film except that portion of the nanofiber-structure formed in the at least one hole corresponding to a opening formed by patterning the first insulating layer as claimed.

Claims 13-17 variously depend from independent claim 12. Therefore, claims 13-17 are patentable over the combination of Doan and Han for at least those reasons presented above with

respect to claim 12. Accordingly, Applicant respectfully request reconsideration and withdrawal of the rejection of claims 1-9 and 11-17 under 35 U.S.C. § 103(a).

New claim 18 is patentable over the applied art because the applied art fails to disclose or suggest a cold cathode light emitting device as claimed. (See discussion above.)

The application is in condition for allowance. Notice of same is earnestly solicited. Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Penny Caudle (Reg. No. 46,607) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

By _____

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